REMARKS/ARGUMENTS

Support for new claim 34 is provided at e.g., p. 11, line 37. Support for new claim 35 is provided at e.g., p. 12, lines 1-2. No amendment should be construed as acquiescence in any ground of rejection.

A substitute sequence listing is provided. The sequence listing is the same as previously except that SEQ ID NOS. 9 and 10 directed to the mature heavy chain and light chain variable region sequences of the human GF4 antibody are added. The sequences are obtained from Kabat, Sequences of Proteins Of immunological Interest (1991), cited at p. 32, lines 7-9 and incorporated by reference at p. 40, last paragraph. The sequences in the paper and text forms of the sequence listing are the same as those in the application including the Kabat reference incorporated by reference. No new matter is involved.

5. The Examiner alleges that the specification lacks written description of claims 6 and 14-17 on the basis that the inventors lacked possession of humanized antibodies using a species other than mice.

However, applicants submit that the VTm1.1 antibody disclosed in the present specification (and humanized forms of it) is representative of the genus of antibodies claimed. This exemplary antibody is representative of other antibodies in the claimed genus in that it demonstrates the necessary common attribute of antibodies of the genus, namely, a particular binding specificity from which desirable functional properties follow. The VTm1.1 antibody is also representative in that it can be used to identify other antibodies falling within the genus as described at p. 11, first paragraph of the specification. The general structural characteristics of antibodies (e.g., five classes of antibody of well-defined characteristics) are well known and summarized in the specification (see, e.g.,). As illustrated by Example 13 of the Written Description Guidelines, these characteristics do not require exemplification. By reducing to practice a representative example, applicants have, as in the patents cited above, shown possession of a genus of antibodies competing with the exemplified antibody.

Viewed in another manner, the combined disclosure of a well-characterized antigen (i.e., verotoxin II) and an exemplary antibody can be viewed as analogous to identifying

specific co-ordinates on such an antigen to which a genus of antibodies bind. The competition assay serves to physically define a locus within verotoxin II to which a claimed genus of antibodies bind. By describing the locus on a well-characterized antigen to which a genus of antibodies bind, applicants have shown possession of the genus of antibodies binding to this locus in a manner analogous to Example 16 of the guidelines.

A quick glance at the USPTO database indicates numerous US patents in which a genera of antibodies are defined by reference to competition with an archetypal antibody. Examples of such claims include US 7,238,353, claim 12; US 6,455,264, claim 1; US 6,887,468, claim 45; US6,733,752, claim 1; US 7,090,843, claim 8; US 7,192,585, claim 2 and US 7,345,151, claim 1. Review of such patents indicates that in many instances, the archetypal antibody defining a genus is the only example of the genus disclosed in the patent.

The use of antibodies from other species as starting materials from humanization is specifically disclosed in the application (p. 13, line 36) and earlier reference works on humanization, such as Queen US 5,585,089 and US 5,693,762 (cited at p. 30, line 31). In fact, one of the earlier antibodies to be humanized was a rat rather than a mouse antibody (see US 6,982,321, Example 3). Applicants might agree that in practice the art has usually used materials from lower mammals, such as mice or rats, as starting points for humanization. Such selection arises because there would be no apparent advantage in starting from an antibody from a higher mammal and ethical reasons against doing so, particularly if there was no advantage. The case law has established that a specification need not enable embodiments that in practice would never be used "It is always possible to theorize some combination of circumstances which would render a claimed composition or method inoperative, but the art-skilled would assuredly not choose such a combination." *Ex parte Janin*, 209 USPQ 761 (PTOBAI 1979). "Claims need not recite...factors where one of ordinary skill...would consider them obvious." *In re Skrivan*, 166 USPQ 85 (CCPA 1970). It is respectfully submitted that similar considerations apply to written description as enablement because exotic embodiments that cannot reasonably be enabled cannot be possessed either. For the types of antibodies that a practitioner would in practice be interested in using for making a humanized antibody, it is submitted that a mouse antibody is representative of the genus.

6. Applicants have amended claim 7 to provide SEQ ID NOS. for the GF4 antibody light and heavy chain variable regions to make equivalence clearer. The sequence listing has also been amended to include additional sequence identifiers for GF4. The sequences are obtained from the Kabat 1991 compendium cited at e.g., p. 31 first paragraph of the specification and incorporated by reference at p. 36, last paragraph.

7. Applicants have written in Tables 2 and 3 into claim 11 to avoid reference to tables 2 and 3.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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